

AGU Fall 1998 Abstract

Justin Maki, Jean Lorre
JPL

The Color of the Martian Sky: Mars Pathfinder Measurements

We use the absolute calibration of the Imager for Mars Pathfinder (IMP) to measure the color of the Martian sky using a set of IMP images taken during the 83-Sol Pathfinder mission. We use IMP images acquired at wavelengths of 440, 480, 530, 600, and 670 nm. By measuring the sky spectra directly at various times during the Martian day we eliminate the reliance on an atmospheric model to produce true color images. Our results show that the sky color during the day is very similar to the Viking sky: a light yellowish brown color (sometimes referred to as butternut). Sunrise and sunset sky color is a brownish gray color, with a distinctive bluish tint within 5 degrees the sun. Using a sophisticated output device calibration procedure, we present color prints that faithfully reproduce the calculated color. When viewed under the correct lighting conditions, these color prints recreate the color scene as viewed from the landing site.